Reading ASCII data in CDAT

Goal: Learn how to read ASCII data in CDAT.

- Use Python "string" Module
- Use VCDAT
- In general use browser.gui_ascii.read

```
browser.gui_ascii.read( text_file ,header=0, ids=None, shape=None,
    next='------',separators=[';',',',':'])
```

- If data are in columns use browser.gui_ascii_cols.read

```
bowser.gui_ascii_cols.read( text_file ,header=0, cskip=0,
    cskip_type='columns', axis=0, ids=None, idrow=0,
    separators=[';',',', ':'])
```

Python "string" module example:

```
import string,sys,MV

# First of all we need to open the ASCII file
# For this we used the Python built-in command "open"
f=open(sys.prefix+'/sample_data/test_col.asc')

# Now we need to read its content
# To read all of its content we use the "readlines" command
# This returns a list of strings, each element of the list represents
# one line in the file
lines=f.readlines()

# Note to read one line at a time (inside a loop for example, if the ascii file is too big
# You can also f.readline()

# Now we can loop through the lines and look at the content
data1=[]
data2=[]

for line in lines:
    # Splits the line into a list of string with seprartion
    # when it finds space or tabs or return
    sp=string.split(line)

    # Now try to see if the first element is a number, if not skip
    # we are only interested in the 2nd and third column here
    try:
        val1=float(sp[1])   # second column
        val2=float(sp[2])   # third column

        data1.append(val1)
        data2.append(val2)

    except:
```

```
        pass       #  we didn't have 2 float at the begining of this line


# Now converts the 2 datasets to MV for use in other CDAT Packages
data1=MV.array(data1,id='dataset1')
data2=MV.array(data2,id='dataset2')

# Just for fun prints the average of data1
print MV.average(data1)
```

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